AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-11. (cancelled)

12. (currently amended) A method for controlling a hydraulic system, particularly of a mobile working machine having at least one internal combustion engine driving at least one hydraulic pump with adjustable volumetric displacement whereby:

the speed of the internal combustion engine is detected by a metrological instrument;

difference in differential pressure and the volumetric displacement of at least one hydraulic pump with adjustable volumetric displacement is determined by at least one measurement unit;

available power from the internal combustion engine is determined from the speed measured;

power consumed by each hydraulic pump with adjustable volumetric displacement is determined from the difference in differential pressure measured, the volumetric displacement, and the speed;

so that the volumetric displacement of at least one hydraulic pump with adjustable volumetric displacement is controlled by a control system so that the total power consumed by at least one hydraulic pump with adjustable volumetric displacement is lower than or equal to the power available from the internal combustion engine or the power delivered or is restricted by the pump, if applicable, in the case in a case of energy recovery at the hydraulic pump[[.]]; and

wherein the internal combustion engine drives additional hydraulic fixed-displacement pumps and that the power consumed by each of the fixed displacement pumps is approximated from the speed of the drive by calculation and the system pressure measured, and added to the total power consumed.

Appl No 10/544.155
Amdt dated January 15, 2008
Reply to Office Action of October 16, 2007
Attorney Docket 18120

13. (cancelled)

14. (currently amended) A method according to Claim 2 claim 12, wherein the calculation of the power of the internal combustion engine, the hydraulic pumps with adjustable volumetric displacement, or the hydraulic fixed-displacement pumps, takes place by means of stored effective relationships, particularly in the form of characteristic curves or families of characteristics.

15. (currently amended) A method according to Claim 2 claim 12, wherein if several hydraulic pumps with adjustable volumetric displacement are present, the volumetric displacement of the individual hydraulic pumps is set or limited using stored control relationships, particularly for prioritizing individual hydraulic pumps.

16. (currently amended) A method according to Claim 2 claim 12, wherein at least one input device, particularly an accelerator pedal or a joystick detects a control command from an operator.

17. (currently amended) A method according to Claim 5 claim 16, wherein if several hydraulic pumps with adjustable volumetric displacement are present, the volumetric displacement of these individual hydraulic pumps is adjusted according to the operator's control commands.

18. (currently amended) A method according to Claim 2 claim 12, wherein the control system controls the power delivered or made available by the internal combustion engine by influencing its speed, in addition to adjusting the power consumed by the hydraulic pumps with adjustable volumetric displacement.

19. (currently amended) A method according to Claim 2 claim 12, wherein the power delivered to the internal combustion engine is integrated into the calculation of total power in operating modes in which a hydraulic pump with adjustable volumetric displacement acts as a drive.

20. (currently amended) A method for controlling a hydraulic system, particularly of a

mobile working machine having at least one internal combustion engine driving at least one hydraulic pump with adjustable volumetric displacement whereby:

the speed of the internal combustion engine is detected by a metrological instrument;

differential pressure and the volumetric displacement of at least one hydraulic pump with adjustable volumetric displacement is determined by at least one measurement unit;

available power from the internal combustion engine is determined from the speed measured;

power consumed by each hydraulic pump with adjustable volumetric displacement is determined from the differential pressure measured, the volumetric displacement, and the speed;

the volumetric displacement of at least one hydraulic pump with adjustable volumetric displacement is controlled by a control system so that the total power consumed by at least one hydraulic pump with adjustable volumetric displacement is lower than or equal to the power available from the internal combustion engine or the power delivered or is restricted by the pump, in a case of energy recovery at the hydraulic pump; and

A method according to Claim 1, wherein that in a case in which a hydrodynamic converter is provided for motive transmission, its power consumption, particularly from a stored speed-torque characteristic, will be calculated by the control system and taken into consideration in the total power calculation.

21. (currently amended) An electronic control system to implement the method according to Claim 6 claim 17.

22. (currently amended) An electronic control system to implement the method according to Claim 7 claim 18.